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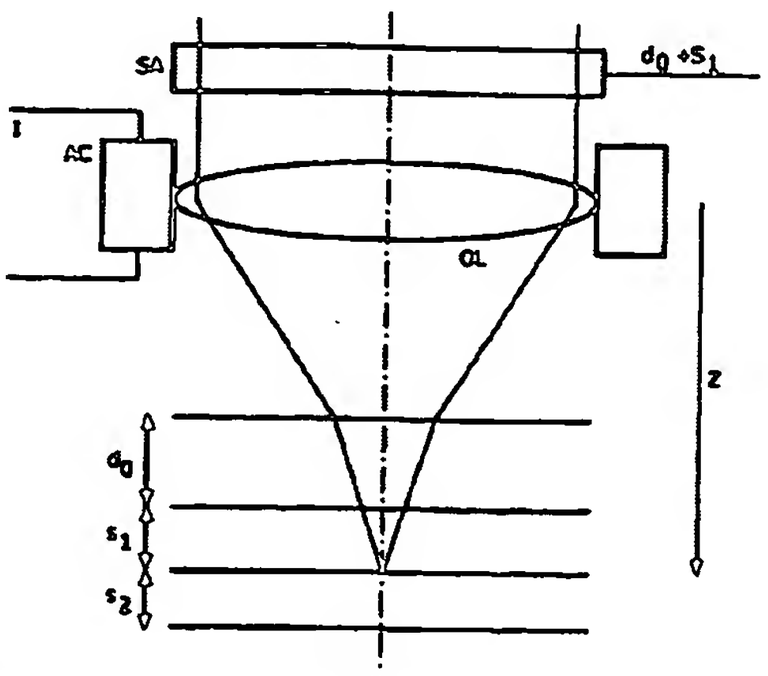
(54) Title: METHOD AND APPARATUS FOR MEASURING THE DEPTH OF A DATA RECORD LAYER IN AN INFORMATION RECORD MEDIUM



(57) Abstract: Apparatus and method for measuring the depth of data record layers of an optical storage disc having a cover layer of thickness d, an entrance surface (S), and, for example, a first data layer (L0), a second data layer (L1) and a third data layer (L2). The optical apparatus comprises a spherical aberration compensator (SA), and an objective lens (OL) mounted in an actuator (AC), the actuator (AC) receiving a current I and being arranged and configured to move the objective lens (OL) in the z (axial) axis relative to the optical storage disc. Light incident on the objective lens (OL) is converged into a cone-like beam such that it is focussed on one of the data layers (D1). A control signal is used to keep the scanning spot focussed on the data layer (L1). This control signal is the focus error signal (FES) and is provided by the actuator drive (AC). In order to provide the spherical aberration compensator (SA) with right control signal, the depth of each data layer must be measured and means are provided for measuring the depth of the data layer(s) of a single- or multi-layer disc, and this achieved by using the distance between zero-crossings of the focus error signal (FES).

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